

Work Order ID 52859



Page 1

October 15, 2009 3:48:05 PM

Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: *PS*

Date: *09-10-15*

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D407-667-145

Rev C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D407-667-105 CHG003.

HJ-fn BG 09/11/11

110

0.00



Packaging

Packaging

Memo

0.00

Packaging

9/11/11sp

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D407-667-145 using CNC bender program 407-fw and Folio FT016

(1X)

MB

09-11-02

Pto

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D407-667-105 PAR #: _____ Fault Category: Cross holes NCR: (Yes) No DQA: ✓ Date: 05-11-18
 Resolution: Accepted ^{Rework} Disposition: Rework ^{use as is} QA: N/C Closed: ✓ Date: 05-11-18

NCR: <u>5285A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09.11.04	120	TWO MARK GOUGES ON TUBE, APPROX 0.020" DEEP IN RADUS AT TOP OF CUFF Chips stuck on top of Jig when R.C. block removed. R.C. Process / does not happen usually.	<u>CP</u> 09.11.04 PC QSI 042	ACCEPTABLE. SEE ATTACHED EMAIL. BLEND OUT GOUGES	AWM 9-11-04	<u>S</u> 09/11/04	<u>CP</u> 09.11.04 PC QSI 042	<u>S</u> 09/11/04
				FOUND MARKS ON CUFF AT STEP 140 ALERTED Q.C.	AWM 9-11-04	<u>↑</u>		

NOTE: Date & initial all entries

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

130

QC15- Crosstube Dimensional Check

0.00



278 09/11/03

QC

Memo

0.00

Quality Control



140

Crosstubes

0.00



0.00

Crosstubes

Memo

Crosstubes

1- scrib batch # inside of cuff 2-Drill pilot holes in tube using drill Jig DT8541 & DT8542 as per Dwg D407-667-145. Drill all (3) top holes. 3-Drill and Ream all holes in tube to finish size using drill Jig DT8541 & DT8542 as per Dwg D407-667-145 Check



MB 09-11-03

150

Crosstubes Chemical Conversion

0.00



0.00

HandFXtube

Memo

Hand Finishing Crosstubes

1

ALM 9-11-3

Work Order ID 52859



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Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

160

QC3- Inspect Part Finish

0.00



=> S o r l u l a y

QC

Memo

0.00



✓

Quality Control

170

QC5- Inspect part completeness to step on W/O

0.00



=> S o r l u l a y

QC

Memo

0.00



✓

Quality Control

180

Outsource process - NDT per QSI038 4.1

0.00



Outsource2

Memo

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038 Or ☐ Issue P/O 10710 LPI as per ASTM 1417 ☐ Level 2 Attach copy of NDT results to work order

cy
09-11-3

Work Order ID 52859

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Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

190

0.00



Packaging

Packaging

Memo

0.00

Packaging

Inspect for transit damage ☐ Ensure copy of NDT results attached to work order.10/29/09/50

200

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

Inspect for damage & ensure results are as per Dwg D206-667-145

RT 09-11-06

210

0.00



SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside and outside crosstube as per QSI 005 4.2 ☐ 2-Paint outside
crosstube with White Imron as per QSI 005 4.2 ☐ PRIME: ☐ Start
Time: 6:00 ☐ Finish Time: 7:00 ☐ PAINT: ☐ Start
Time: 10:00 ☐ Finish Time: 11:00

RT 09-11-06

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Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 	Pick Kit	0.00							
Packaging	Memo	0.00							<u>9/11/11</u>
Packaging									
260 	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							<u>1 2</u>
Quality Control									
270 	Packaging	0.00							
Packaging	Memo	0.00							<u>12/11/11</u>
Packaging	Identify and pack for shipping as per PPP D407-667-105								
	Location: _____								
	PPP Rev: <u>1</u>								

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Item ID: D407-667-105

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 16/10/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 05/11/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/11

MF
09-11-11

Picklist Print

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Page 1

Work Order ID: 52859

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd

Comments:

Start Date: 16/10/2009

Required Date: 05/11/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516 Washer		Purchased	No			100	Each	1,706.000	18.0000			

9/11/11 SP

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1706

100564

2

106167

6

107534

34

107959

43

108246

46

108672

2

109059

49

109752

22

110363

46

110523

57

111279

39

112082

68

112314

500

112794

292

112828

500

18x 50

Rubber Cushion

D3595-063-395 B# 44667 ml 09 11 09

Picklist Print

Page 2

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Work Order ID: 52859

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd


Start Date: 16/10/2009

Required Date: 05/11/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2873-043RevA		Manufactured	No			230	Each	53.0000	2.0000			
												

Nut Plate Assembly

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	53	
45370	18	
<u>45422</u>	15	
50002	20	

ml 09 11 10

D2873-045RevA

Manufactured No



Nut Plate Assembly

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	71	
45210	11	
<u>46772</u>	20	
50001	40	

ml 09 11 10

Picklist Print

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Work Order ID: 52859

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	East Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2891-1RevA1		Manufactured	No			230	Each	81.0000	2.0000			

2.25 Support

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	81	
40336	1	
<u>41198</u>	16	
43880	20	
45935	4	
46159	20	
50952	20	

ml 09 11 09

D407-667-
105TRNRevC

Manufactured No

230

Each

2.0000

1.0000

Crosstube Turning Detail

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
LG	2	
48465	1	
50588	1	

IX MB 09-11-02 ✓

Picklist Print

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Work Order ID: 52859

Parent Item: D407-667-105RevC

Parent Item Name: Crosstube Fwd


Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21920-20 		Purchased	No			230	Each	167.3000	4.0000			
Clamp (per MIL-DTL-8783C)												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	167.3	
103478	2	
106484	12	
109269	9.3	
110536	10	
<u>111281</u>	34	
112307	50	
112624	39	
112793	11	

ml 091109

AN5-10A



Bolt

Purchased

No

260

Each

147.0000

10.0000

9/11/11 SP

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	147	
107013	8	
110363	2	
111819	20	
<u>112314</u>	50	
112385	50	
112805	17	

1050

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Shop Packet Print

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Picklist Print

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Work Order ID: 52859



Parent Item: D407-667-105RevC



Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-30A 		Purchased	No			260	Each	77.0000	4.0000		9/11/11	SP
BOLT												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

77

110467

77

4x50

AN5-32A



Purchased

No

260

Each

113.0000

4.0000

9/11/11

SP

Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

113

106242

3

106519

4

110363

17

112082

39

112805

50

4x50

Picklist Print

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Parent Item Name: Crosstube Fwd

Start Date: 16/10/2009

Required Date: 05/11/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20601-AD4W10		Purchased	No			260	Each	241.0000	14.0000			
RIVET												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	241	
110665	100	
111177	141	

MS21042L5	Purchased	No			260	Each	1,118.000	4.0000				
Nut												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1118	
110382	10	
111127	4	
111636	104	
112314	1000	

ml 02 10 11

9/11/11 sf

4x52

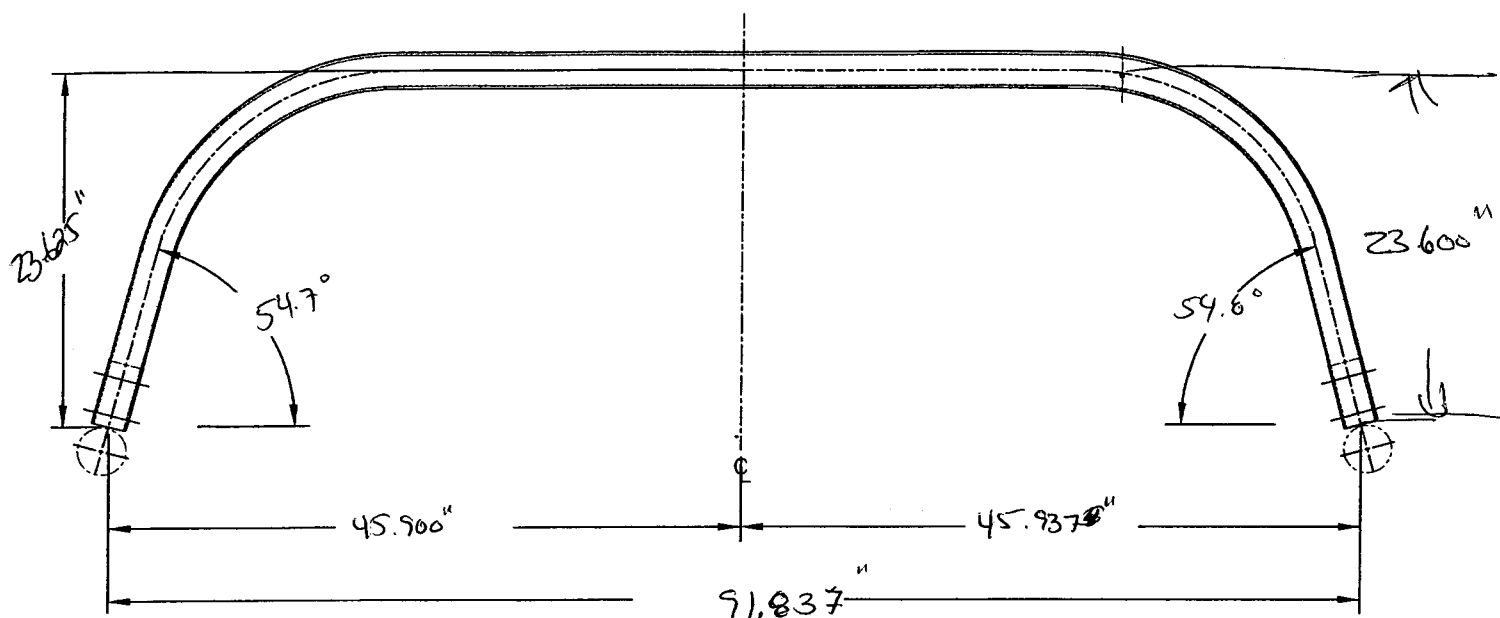
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Shop Packet Print

Page 6

DART AEROSPACE LTD		Work Order:	52859
Description: Crosstube High Fwd (407)		Part Number:	D407-667-105
Inspection Dwg: D407-667-145 Rev: <i>B C</i>		Page 1 of 1	

Required Dimension	Min	Max
Height	<i>23.48</i> 23.41	<i>23.60</i> 23.67
1/2 Span	<i>45.88</i> 45.81	<i>46.0</i> 46.07
Angle	54	56
Total Span	91.76	92.0



Comments

QC15 Inspection	<i>S</i>
Date	<i>07/11/03</i>

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

Item	Qty -145	Part Number	Description
1	X	D407-667-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
2	1	D6010-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6010-115
FINISHED LENGTH = 113.20±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-145" AND BATCH NUMBER ON
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 17.8 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY,
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE
THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS
ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

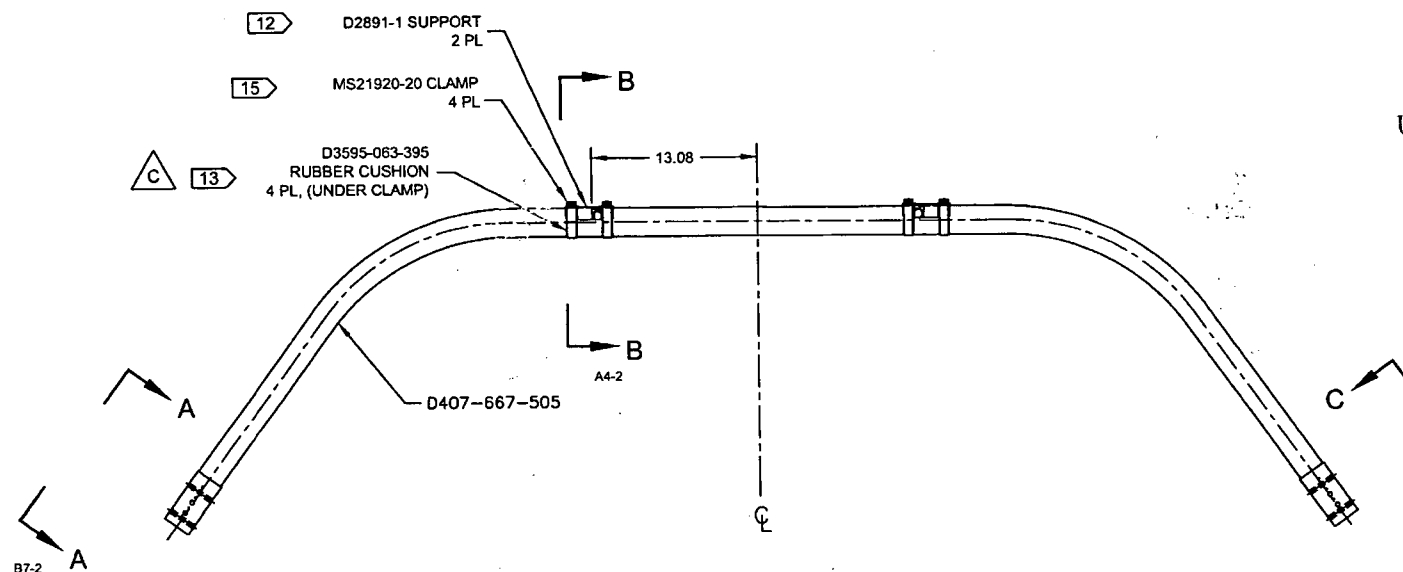
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WORK ORDER
NO. 52859
B-109-10-15

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03/11/12 14P

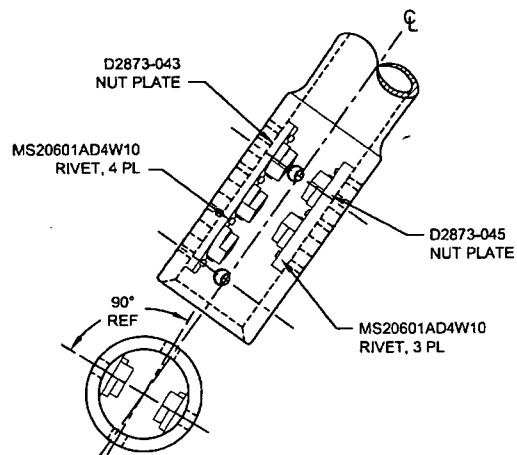
C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. 7 ADD TOLERANCES (ZN C6-3, C4-3, D2-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	02.05.08
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	<u>9P</u>	RF	
CHECKED	<u>9P</u>		
MFG. APPR.	<u>9P</u>		
APPROVED	<u>9P</u>		
DE APPR.	<u>9P</u>		
DATE	08.11.06		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D407-667-145	REV. C SHEET 1 OF 4
TITLE CROSSTUBE ASS'Y (407 HIGH FWD)	SCALE NTS
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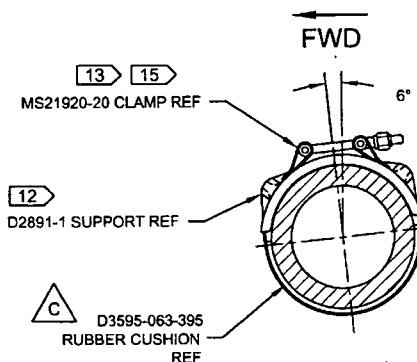
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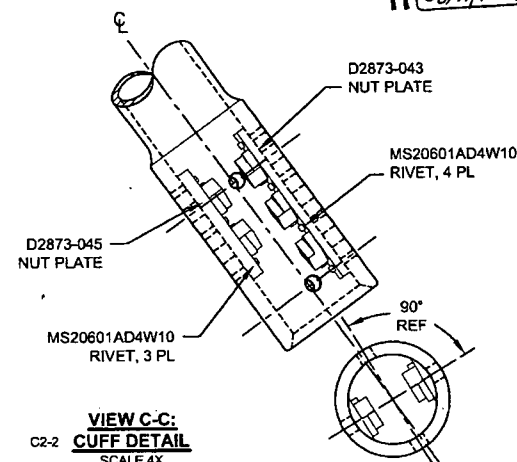
D407-667-145
ASSEMBLY DETAIL
(VIEW LOOKING FWD)



VIEW A-A:
CUFF DETAIL
SCALE 4X



SECTION B-B
SCALE 5X



VIEW C-C:
CUFF DETAIL
SCALE 4X

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4	DRAWING NO.	REV. C
MFG. APPR.	4	D407-667-145	SHEET 2 OF 4
APPROVED	4	TITLE	SCALE
DE APPR.	4	CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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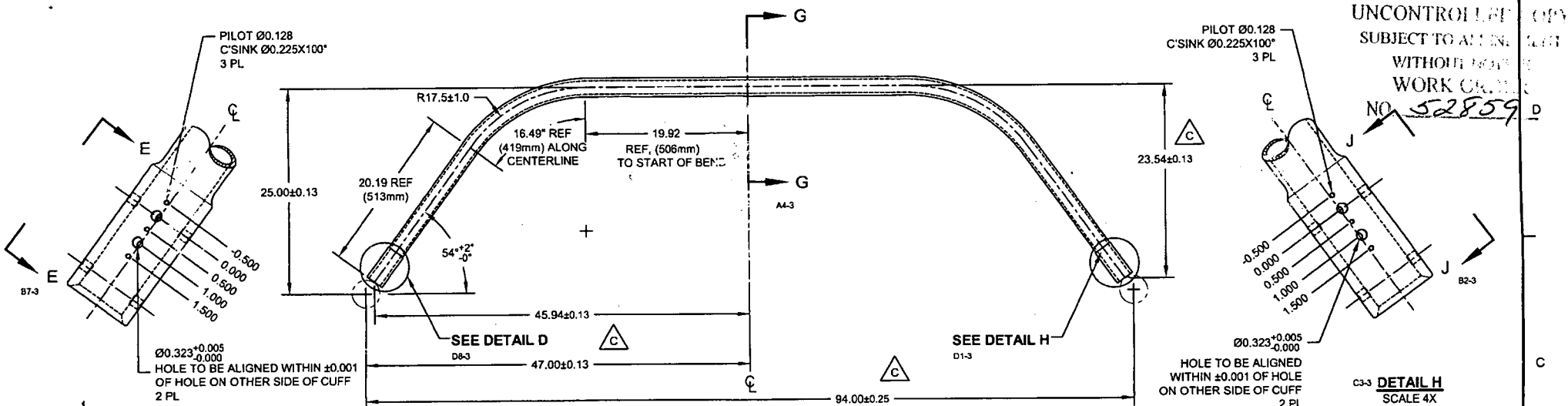
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WORK ORDER

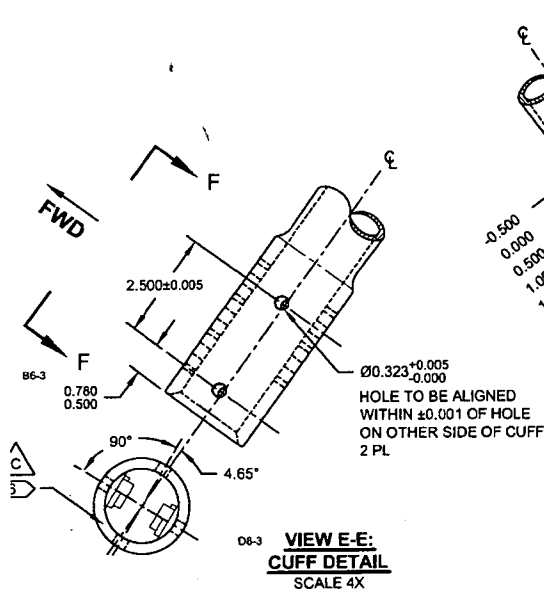
NO. 52859



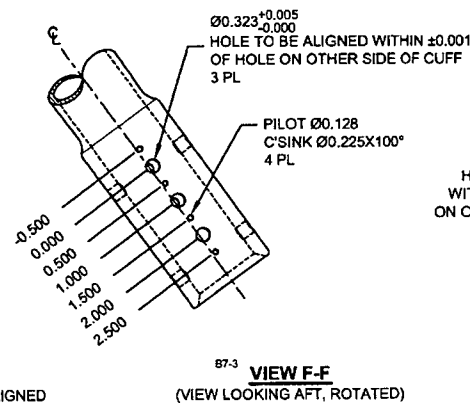
C6-3 **DETAIL D**
SCALE 4X
(VIEW LOOKING FWD)

D407-667-505
BENDING AND DRILLING DETAIL
(VIEW LOOKING FWD)

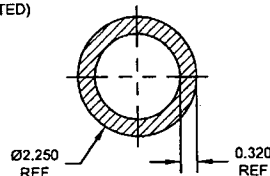
C3-3 **DETAIL H**
SCALE 4X
(VIEW LOOKING FWD)



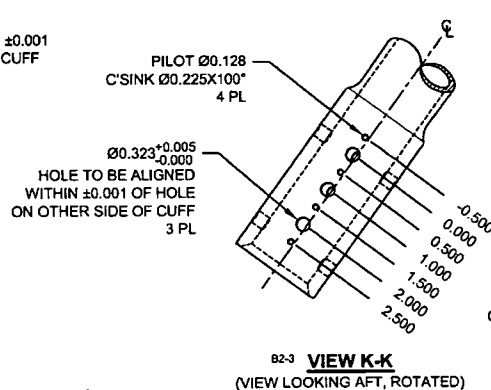
D6-3 **VIEW E-E:**
CUFF DETAIL
SCALE 4X



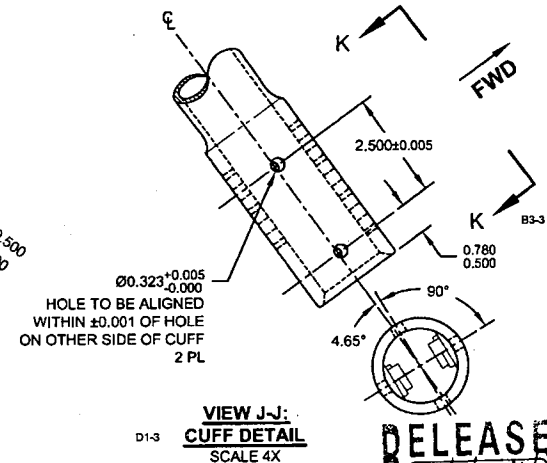
B7-3 **VIEW F-F**
(VIEW LOOKING AFT, ROTATED)



D4-3 **SECTION G-G**
SCALE 5X



B2-3 **VIEW K-K**
(VIEW LOOKING AFT, ROTATED)



D1-3 **VIEW J-J:**
CUFF DETAIL
SCALE 4X

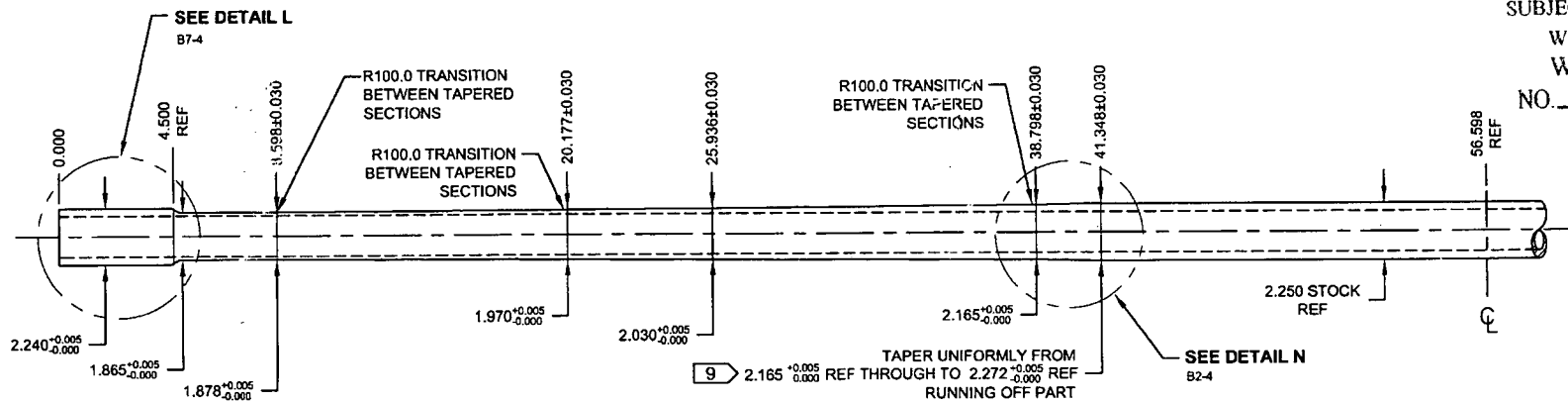
RELEASED
02/11/12 MJP

DESIGN	Q	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	Q	DRAWING NO. D407-667-145	REV. C
MFG. APPR.	E		SHEET 3 OF 4
APPROVED	Q	TITLE	SCALE
DE APPR.	Q	CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

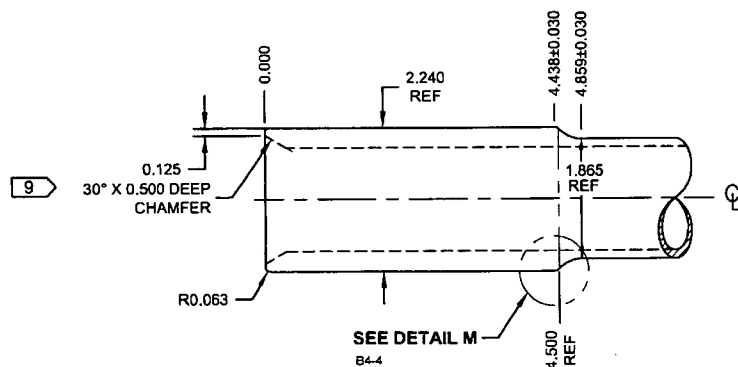
SHOP COPY

RETURN TO

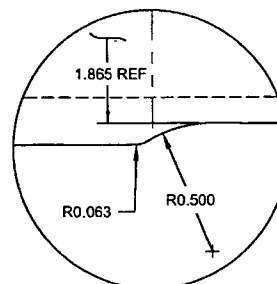
ENGINEERING
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WITHOUT NOTICE
WORK ORDER
NO. 52559



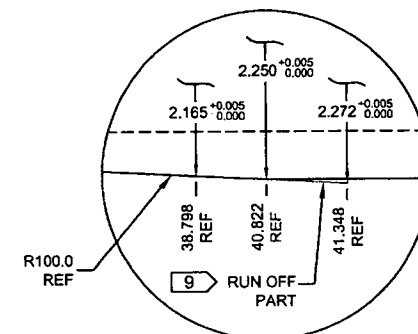
C TURNING DETAIL



**DETAIL L:
CROSSTUBE CUFF**
NOT TO SCALE



**DETAIL M:
CUFF TRANSITION**
NOT TO SCALE



**DETAIL N:
TAPER RUN-OFF**
NOT TO SCALE

RELEASED
02/11/2006

DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	EF	DRAWING NO. D407-667-145	REV. C
MFG. APPR.	EF		SHEET 4 OF 4
APPROVED	EF	TITLE	SCALE
DE APPR.	EF	CROSSTUBE ASS'Y (407 HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

32.8 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								X		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2	*2			D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
15									*1	D2856-600-851	ABRASION STRIP
16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
18									*2	MS21920-24	CLAMP
19				4	4	4		4		AN5-32A	BOLT
20							4		4	AN5-34A	BOLT
21				4	4	4	4	4	4	MS21042L5	NUT (OR MS21042-5)
22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
30	8									AN4-6A	BOLT
31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4		AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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32-00-00

Chris Provencal

From: Bill Beckett [bbeckett@dartaero.com]
Sent: November 4, 2009 8:10 AM
To: 'David Shepherd'
Cc: 'Mike Petsche'; 'L Lacelle'; jmurdoch@dartaero.com; 'Chris Provencal'; ssheldon@dartaero.com
Subject: RE: NCR D407-667-105

David,
As is our regular procedure, whenever an NCR is raised, there is Corrective Action required. This is being worked on. Linda and her team are leaning towards the use of protective sleeves post machining.
Bill

-----Original Message-----

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: November 3, 2009 8:45 PM
To: 'Chris Provencal'
Cc: 'Bill Beckett'; 'Mike Petsche'; 'L Lacelle'; jmurdoch@dartaero.com
Subject: RE: NCR D407-667-105

Chris,

I believe it is acceptable to polish out this damage since it is in a relatively low stress area of a crosstube (407 fwd) with a fair bit of margin.

Bill,

Have you talked to the guys yet ... WTF???

They need to be more careful when they work on or move these tubes around.

David

-----Original Message-----

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Tuesday, November 03, 2009 1:45 PM
To: 'David Shepherd'
Subject: NCR D407-667-105

David,

Another dinged tube, this on a D407-667-105 in the top radius of the cuff. The depth looks like approximately 0.020" for the large ding in the middle of the pic. The tube is currently alodined in the picture. They can probably blend it out, but how noticable the blending would be remains to be seen. This part of the tube can probably be blended with little effect on the strength pf the tube, however we have no idea of any underlying damage of the material. Dan. P thinks the damage is most likely from a grinding tool, the rotating metal collar under the grinding disk hitting the metal.

What do you think?

-Chris

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.423 / Virus Database: 270.14.46/2477 - Release Date: 11/02/09 19:39:00



LEADER OF THE NEW ALBION KETON

15307

[illegible]